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Designing a New Project Model to Nammo Lapua Oy Vihtavuori Plant

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Master's Thesis

24.2.2016 Jani Sjöman

Master's degree (UAS)

SAVONIA UNIVERSITY OF APPLIED SCIENCES **THESIS**
Abstract

Field of Study Technology, Communication and Transport			
Degree Programme Master's Degree Programme in Industrial Management			
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Title of Thesis Designing a New Project Model to Nammo Lapua Oy Vihtavuori Plant			
Date	24.2.2016	Pages/Appendices	21 + 20
Supervisor(s) Päivi Korpivaara			
Client Organisation/Partners Nammo Lapua Oy Vihtavuori Plant			

Abstract

The aim of this study was to create a uniform Project Model for Nammo Lapua Oy Vihtavuori Plant to ensure successful project management and execution in the company. Good project management skills and functioning project model are essential in today's rapidly changing markets for companies to survive and prosper.

This thesis has two parts. The first part is theory about project. The second part covers the practice part as in it a New Project Model is created for Nammo Lapua Oy Vihtavuori Plant.

The work consisted of gathering information about company's current situation and using that information together with best practices and related literature to create a model for project management suitable for the company in question.

As a result of this thesis, a project model was created consisting of process description for company's new project management process and necessary project document templates to support the implementation of the new model.

Keywords
Project, Project Management, Project Model, PMBOK

CONTENTS

LIST OF ABBREVIATIONS

NLAVRI = Nammo Lapua Oy Vihtavuori Plant
PATA = Browser-based Quality Management System used in NLAVRI
Handbook = NLAVRI's Quality Management System
PMBOK = Project Management Body of Knowledge, a project management standard created by Project Management Institute Inc.

1 INTRODUCTION

Projects and project management are essential parts of modern way of doing business. A Project culture is widespread and commonly adopted by companies, communities and governances across the globe as it provides an agile, broadly studied and effective way for management to achieve their goals. As the world has become more and more project-orientated and business environment more hectic, companies have to adopt agile ways of working to survive and keep up with the pace in the constantly changing business climate. This has a significant impact especially on companies operating in traditional and stable fields of industry like defense industry which is commonly known for being quite old-fashioned and strict concerning management methods and ways to operate.

The aim of this thesis was to create a new project management model with goals of creating standard methods to execute and manage projects as also to build a unified project culture for Nammo Lapua Oy Vihtavuori Plant. The new model is based on a draft made by an external consultant agency. The model was made by modifying templates of a consultant agency and also by creating new ones and creating process description for company's project management process to work as a general instruction for project personnel. Also procedures concerning informing company's personnel about new methods and storing the data on company's quality management system are presented.

The thesis was executed by gathering information about current situation and improvement needs of Nammo Lapua Oy Vihtavuori Plant's project management and comparing it to project management theories from literature. The information gathering was made by studying company's procedures related to project management and by interviewing company's project personnel.

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2 NAMMO LAPUA OY VIHTAVUORI PLANT

2.1 Company

The Nammo Group is a global defense industry corporate employing about 2200 people worldwide. It has altogether 22 production units and offices located in 11 countries. Nammo is owned with equal shares by Finnish defense and aerospace industry company Patria and Norwegian Ministry of Trade, Industry and Fisheries. The majority, about 85 %, of Nammo's turnover comes from military markets. The rest 15 % comes from civilian markets including for example hunting rounds, reloading propellants and sea safety equipment. (Nammo, 2016)

Nammo Lapua Vihtavuori Plant (later NLAVRI) is one production site of Nammo Lapua Oy which is a part of the Nammo Group and which also has a production site at Lapua for small caliber rounds, a subsidiary in Vihtavuori for propellant manufacturing and two offices located in Tampere and Vantaa. (Nammo, 2016)

Vihtavuori Plant is located in Vihtavuori about 25 kilometers from Jyväskylä. NLAVRI has a long history working in defense industry as it was originally founded in 1922 to produce propellants and explosive materials for Finnish Defense Forces. Today producing propellants and explosive materials have been separated to separate company, Nammo Vihtavuori Oy, as NLAVRI is focused on producing ammunition for military use. NLAVRI product portfolio consists of shell products and charges for artillery and mortar systems, mortar rounds, medium caliber rounds, fuzes, base bleed units and hand grenades. NLAVRI operates in two production units, one in Vihtavuori and one in Sastamala where shell products are produced. Altogether NLAVRI employs about 60 persons. (Nammo, 2016)

2.2 PATA-system

PATA-system is a browser-based environment where Nammo Lapua Oy's quality management system, or Handbook as it is called in the company, is stored and maintained. The handbook in PATA contains descriptions of company's management procedure, quality policies and the core activities and practices related to the assessment of activities. (Nammo Lapua Oy, 2016)

3 PROJECT MANAGEMENT THEORY

Project management is much studied field of management and there are numerous methods and standards related to it. One of the most well-known and widely used project management standard is Project Management Institute's PMBOK Guide. The PMBOK Guide - 5th Edition is used as a framework in study as it offers a wide range of best-practices for project management.

3.1 Definition of project

Project definitions and their contents are described in many ways depending on the source and viewpoint but one thing is common for almost all definitions and that is the temporary nature of the operation. The Project Management Institute (2013, 3) defines a project as a temporary endeavor undertaken to create a unique product, service, or result. Temporariness means that project has a limited life cycle with a definite beginning and end. The life cycle could be long or short depending on the desired objectives and project's scale and as Project Management Institute (2013, 3) sums it by saying "Temporary does not necessarily mean the duration of the project is short".

Project can be seen as an operation having specific, predefined requirements related for example to its goals, time and budget. A widely accepted definition describes project being a unique entity formed of complex and interrelated activities, having a predefined goal that must be completed by a specific time, within budget, and according to specification (Artto & al. 2011, 17.) A simple description sees project as scheduled problem solving process to overcome a problem occurred in company with problem being either negative or positive (Lewis 2007, 2).

As stated in the first paragraph of this chapter, projects can create different outcomes and results. In the PMBOK Guide - 5th Edition different project outcomes are listed as below

- a product that can be either a component of another item, an enhancement of an item, or an end item in itself
- a service or a capability to perform a service (e.g., a business function that supports production or distribution)

- an improvement in the existing product or service lines (e.g., A Six Sigma project undertaken to reduce defects)
- a result, such as an outcome or document (e.g., a research project that develops knowledge that can be used to determine whether a trend exists or a new process will benefit society).

What separates project from daily ongoing activities, is its unique nature compared to repetitive processes followed by organization's existing procedures (The Project Management Institute 2013, 3). The differences between these repetitive or continuous processes and projects are presented in table 1 drawn up by Artto & al. (2011)

TABLE 1. Differences between projects and continuous processes (Artto & al. 2011, 18-19)

Distinctive features	Projects	Repetitive processes
Requirements that the business environment imposes on the activity	Flexibility, renewal, change	Durability, continuity, predictability
Relationship to change	Aims at an extensive change by creating disequilibrium between status quo and the goal	Aims at an incremental change by maintaining and seeking a balance between various requirements
Target, scope	Unique solution according to customer need	Products and batches according to volume and efficiency goals
Time limitation	Limited in time	Continuous
Resources	Specific and varying resource needs according to purpose (scope)	Stable and constant resource usage
Budget	Budget according to purpose (scope)	Annual budget allocation, production volume-dependent or batch-specific budgets
Perspective on effectiveness and efficiency	Doing the right things (effectiveness), seeking novel solutions and differentiation	Doing the things right (efficiency), seeking cost-effective execution and cost reduction
Directing people to assignments	Project goals set specific needs for individual skills; assignments may vary as the project progresses.	Job descriptions and roles regulate work; assignments are relatively stable and predefined.
Predictability of results	Results are uncertain and susceptible to risks. Experience increases ability to take risks; risk management helps in predicting results.	Results are predictable and can be anticipated. Information from previous repetitions allows predictability; risks are minimized reliance on learning curve.

3.2 Project Management

The PMBOK Guide - 5th Edition defines project management as the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements. Artto & al. (2011, 25) summarizes project management in more general form stating that project management is the application of management practices aimed at achieving the project goal and objectives.

The purpose of project management is presented by Kerzner (2013, 4) as being an enabler of an effective and successful project work by designing to make better use of company's existing resources. Successful project management is the key for successful project operations. Kerzner (2013, 3) describes successful project management as achieving project objectives

- within time
- within cost
- at the desired performance/technology level
- while utilizing the assigned resources effectively and efficiently
- accepted by the customer

3.2.1 Project Management processes

By the PMBOK Guide - 5th Edition, accomplishing project management is done through project management processes categorized into five process groups consisting of 47 processes. The five process groups are: Initiating, Planning, Executing, Monitoring and Controlling, and Closing.

The initiating process group includes processes to authorize project or a phase as the planning process group concentrates on processes defining the project scope and planning the actions to achieve project objectives. The executing process group keeps inside processes performed to complete the work defined. The monitoring and controlling process group consists of processes to track, review and regulate project's progress and performance. In the closing process group there are processes to formally close a phase or project (Project Management Institute 2013, 49.)

Regardless of well-defined interfaces, project management processes interact with each other and overlap in practice (Project Management Institute 2013, 50). Figure 1 reflects the interactive nature of project management processes.

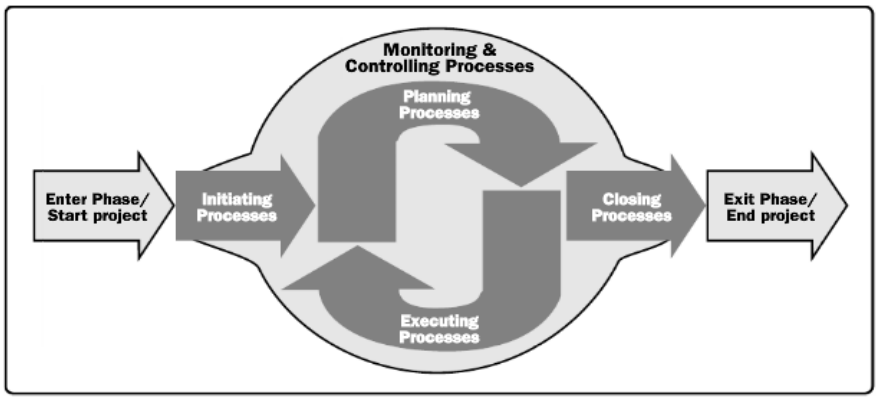

FIGURE 1. Project management process groups (Project Management Institute 2013, 50)

As stated earlier there are 47 project management processes defined by Project Management institute in the PMBOK Guide - 5th Edition. Most of those 47 processes are involved in planning process group, altogether 24 processes, and monitoring and controlling process group, altogether 11 processes (Project Management Institute 2013). This emphasizes the essentiality of planning and monitoring in project management. Without proper planning the chance for success is much smaller as Kerzner (2013, 506) puts it by saying failing to plan is planning to fail. Poor monitoring and control can lead to situations where risks starting to escalate are seen too late to create a corresponding change in activities for minimizing the damages.

3.2.2 Project Management Knowledge Areas

The PMBOK Guide - 5th Edition represents ten project management knowledge areas describing them as entities consisting concepts, terms and activities making up a professional or project management field, or area of specialization. The project management knowledge areas are

- Project Integration Management
- Project Scope Management
- Project Time Management
- Project Cost Management
- Project Quality Management
- Project Human Resource Management
- Project Communications Management
- Project Risk Management
- Project Procurement Management
- Project Stakeholder Management.

4 PROJECT MANAGEMENT AT NAMMO LAPUA VIHTAVUORI PLANT

4.1 Current State

4.1.1 Project Culture

The company has executed many projects but because of a long history of classic functional organizational structure it hasn't developed effective project culture yet. Projects have been seen more like tasks given from the management than actual projects defined in section 3.1. In functional organization each department, production,; quality etc., do their project work independently and it's not effective structure for project work involving members from company's different departments. In functional organization the project manager's role is negligible as all authority centers on the functional manager (Project Management Institute 2013, 22). Figure 2 describes the organizational structure of functional organization

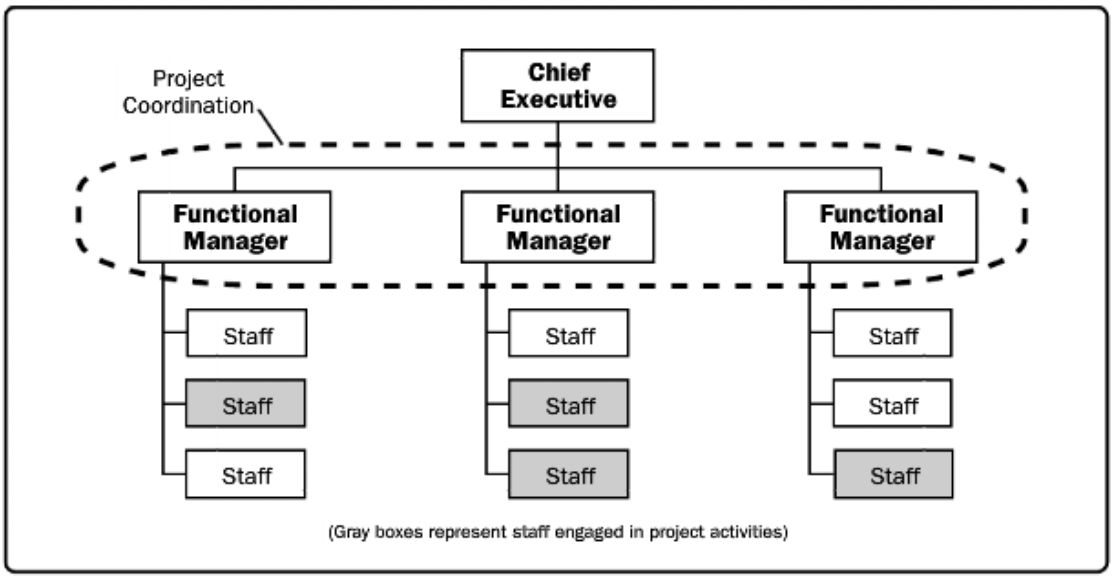

FIGURE 2. Functional organization (Project Management Institute 2013, 22)

From project managerial point of view, company's organizational structure is evolving from functional to balanced matrix organization creating a more agile organization which has a better capability to respond to the needs of rapidly changing markets. The current organizational structure is more like described in figure 3 compared to figure 2. In the balanced matrix organization project manager is needed but has a limited authority over the project (Project Management Institute 2013, 23)

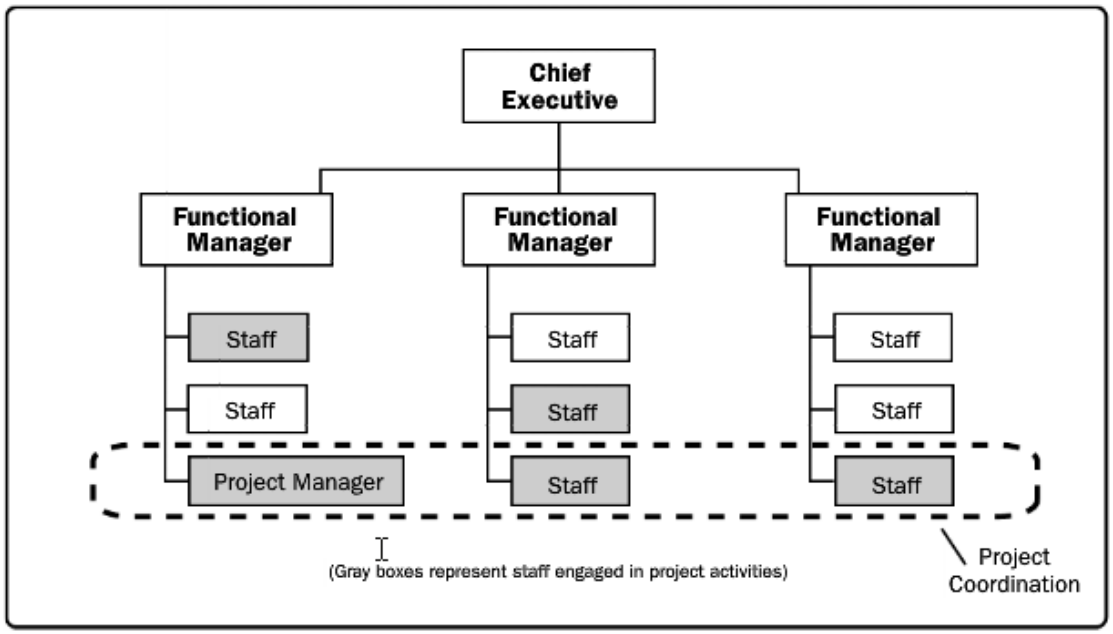

FIGURE 3. Balanced matrix organization (Project Management Institute 2013, 24)

4.1.2 Current Project Management Practices

Currently used project management practices are presented in separate instructions for managing research and development projects at NLAVRI. The instructions are documented in NLAVRI's operation handbook at PATA-system. Instructions focus solely on managing a research and development project for creating a new product and have only few points for universal project management. It's more a technical checklist for product development than a common framework for project management dealing with all kinds of projects. As mentioned in the introduction chapter, NLAVRI has a frame for project management model designed by a project consultant agency but it has not been implemented or modified for company's use yet.

The initiation for project execution comes from management as given task for appointed project manager who creates a project management plan. The initiation from the management works as a project mandate for authorizing the project, there is no separate project mandate document for that. The project management plan is made according to a project management plan template included in project management instructions. The created project management plan is then reviewed and approved by the management or project's steering group. In small case projects management plan is approved by the functional manager as project manager's supervisor. Project execution and its progress are monitored by reviews held throughout a project.

The project scope is described in project management plan by project manager based on the information given from the management. Also other project planning information is presented in the project management plan like resources, risks and timetable. In most cases the project management plan is not updated when changes appear in scope or other factors described at project management plan.

The most fundamental aggregates in project management at the moment in NLAVRI are project's timetable and costs. These are monitored and reported to management by project manager.

4.1.3 Challenges

Based on the interviews of company's project personnel, the things causing most challenges among project personnel and in project management in general were

- project manager's limited authority
- small organization
- lack of resources
- project managers participation in the actual project work
- insufficient instructions
- unclear roles
- insufficient initial data from the project sponsor.

Limited authority of the project manager has its origin in company's heritage from functional organization structure. In some cases project manager's role has been more a project coordinator than manager as authority over the project has been centered on functional manager. Current challenges concerning project manager's role and authority correspond to situation with balanced matrix organization in the PMBOK Guide - 5th Edition as stated in chapter 4.1.1.

Being a relatively small organization has its effects on available project resources. The lack of project personnel leads to situation where project manager is forced to focus and participate in the actual project work instead of project management which should be project manager's main duty. This is quite a common situation in project world and Lewis (2007, 27) describes "working project managers" as a "Big Trap" where the actual project work will always take priority from the management in conflict situations.

Insufficient instructions imply to lack of standardized project management method in the company. Like described in chapter 4.1.2 company does not have very thorough instructions or model for project management to support the management work and much because of that the quality of project management depends on project executive's skills and experience. A comprehensive project management model with relevant document templates for forcing every project manager to keep the required quality is missing at the moment.

When authorizing a project without a specific mandate just by appointing project manager and giving him commission to start the project, project sponsor puts project manager in a difficult situation. Without mandate describing the project's fundamental initial data the project manager might find himself in a situation where he has not enough information for running the project. When that happens, it is most likely that project's primary objectives and other crucial planning data are left unclear for project manager.

4.2 Improvements Needed

Based on company's current situation described in chapter 4.1 there is a need for uniform project model which guides the project work. Current guidance from existing instructions is not sufficient to produce required quality as it "allows" cutting corners from project management's aspect. In this case the uniform project model needed would consist of project documentation templates as well as new description and instructions for project management process. The project management process description gives a frame on how to proceed, what to do and in what order as the templates make sure necessary steps are taken into account in doing the project work. The project model ensures that project management follows the specified standard in every case and it also plays a significant role in building company's project culture.

In addition to what was mentioned in the previous paragraph, a consistent project model would also improve project personnel's effectivity. In a situation where there is lack of human resources it is essential to get the few who are available to work as effectively as possible. Lewis (2007, 26) emphasizes this by saying "It's all about people" and by pointing out that project manager's job is about getting people to perform so that project objectives are achieved.

With the challenge about project manager's authority, possible improvements go deep into company's management culture and strategy as it is only the company's

management which can decide how much authority they can and are willing to delegate downwards on project managers. A situation where project manager has limited authority endangers achieving project objectives in time as for example a decision needed for moving a project to next phase is stuck on the functional manager superior to project manager although the decision could be made by the project manager himself. Management should keep in mind that along given responsibility a sufficient authority should be granted also (Lewis 2007, 27).

5 DESIGNING AND IMPLEMENTING THE NEW PROJECT MODEL

The project model to be designed consists of project management process description and document templates. Process description is created using the PMBOK Guide - 5th Edition as a framework. Templates were designed using drafts made by a consultant agency for the company. Existing template drafts were edited to suit better the company's specific needs. At this point templates of project mandate, project management plan, progress report and final report are seen to be sufficient. More detailed descriptions of the documentation to be created are described in chapter 5.1 and description of project model implementation to practice is presented in chapter 5.2.

5.1 Documentation

5.1.1 Process Description of Project Management

The process description is built based on the five process groups from the PMBOK Guide - 5th Edition: Initiating, Planning, Executing, Monitoring and Controlling, and Closing. These form the frame for company's project management and in process description the actions for systematic project execution are categorized under those five headlines with references to relevant project document templates. Created process description is attached to this study as appendix 1.

5.1.2 Project Mandate

As stated in chapter 4.1.2, the company does not have a separate project mandate in use for authorizing a project and lack of formal mandate might have negative impacts on project management as it can be seen in chapter 4.1.3.

Project mandate's purpose is to ease the transition from initiation to planning, from sponsor to project manager. By creating project mandate the project sponsor describes in high level project's justification, primary objectives and outcomes, scope and possible constraints. Project mandate is approval for the project giving the project an authorization by project sponsor. The created project mandate template is attached to this study as appendix 2.

5.1.3 Project Management Plan

In the created project model a project manager makes project management plan based on project mandate given by the project sponsor. Reviewing and approving the project management plan is done by project's steering group or sponsor in project initiating review.

Project management plan is a comprehensive description of how project will be planned, executed, monitored and controlled and closed. The management plan is developed progressively and elaborated by updates during the whole project life cycle, from start until project closure.

The content of created project management plan template is adopted from template made by consultant agency and from practices presented in the PMBOK Guide. Project management plan template can be found as appendix 3 in this study.

5.1.4 Reports

Report templates created in this study are template for project progress report or performance report as called in the PMBOK Guide - 5th Edition and final report. These reports were produced by project manager with assistance of the project team. Reports are reviewed in project steering group meetings. Templates are based on information from the PMBOK Guide - 5th Edition and drafts from consultant agency.

The progress report consists of overview about project status, accomplishments for the period and scheduled activities for the next period, budget status and forecast, risk management status, issues emerged, and decisions needed from the steering group. Template for progress report is attached as appendix 4.

The project's final report is an essential document as it describes the success rate of the project. In final report the project results are reviewed against objectives and requirements set to it. The idea is to check and analyze what was done compared to what was planned to do, did the budget and timetable meet the conditions, were there some unexpected risks or identified risks that escalated, what went well and what went bad, and so on. Final report works as a good tool for improving organizations project management skills as it states possible mistakes made and enables the possibility to learn from the experience. The final report template is attached to this study as appendix 5.

5.2 Introducing the New Project Model

Implementation of new project model with process description and templates will be done in two phases. First the new model with its documentation is documented in company's Handbook in PATA-system where it goes through a checking and approval process. After the documentation has been checked and approved as a part of company's quality management system, it is introduced to company's personnel and implemented in use.

The new project model is documented as a separate instruction for project management in NLAVRI. The base for documentation is the project management process description in which the whole process for running projects is described with references to templates supporting the process. After the documentation is created in the system, it has to go through a checking and approval phase where documentation is reviewed under NLAVRI document verification policies.

When the model has had the formal approval, it is introduced to company's project personnel and implemented in use. The new way of managing projects is introduced to related project personnel in an information event where the new concept and reasoning are presented. It is essential for a successful implementation that people know the backgrounds leading to change of methods and have a possibility to comment and ask about it. There is no point for giving just an order to start using the new system because it most likely would cause resistance among people happy with the current situation as they have not had a chance to process and adopt the new system before starting to use it. People are more committed to change when they have had time and a chance to get acquainted with it beforehand.

6 CONCLUSION

As a result of this study a new model for managing projects at Nammo Lapua Oy Vihtavuori Plant was established. The new model consists of a general process description for project management and templates of project documents seen to be essential at this point. Templates were created for project mandate, management plan, progress report and for final report. The project management plan template and report templates were designed using draft templates created by a consultant agency as a base and completing the content with practices from the PMBOK Guide - 5th Edition. The project mandate template was designed using practices from the PMBOK Guide 5th Edition as well as utilizing information gathered from company's project personnel.

The aim of this study was to create a complete project management model providing sufficient guidance with appropriate tools for effective project management. The model created covers the project management practices in general level and it works as a pre-stage for more mature project management. By comparing results of this study and objectives set to it, it can be seen that objectives were not fully achieved. The amount of work for designing the templates and creating the process description was so large that scope of study had to be defined to concern the general level project management and more profound approaches had to be left out.

Results of this study can be used as a starting point for implementation of mature project management in NLAVRI. To be a comprehensive project model with mature project management approaches, the model should include more profound aspects and also describe the best practices of project management procedures. In the future this would be the next step for developing the project model in a more effective and mature way.

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APPENDIX 1. PROJECT MANAGEMENT PROCESS DESCRIPTION

Project Management in Nammo Lapua Oy Vihtavuori Plant

Process description

In this document the project management process is described and instructed covering project's whole life cycle from initiation to project closure. Related document templates are as appendices in this document.
The process is divided into five project stages of project work. These five stages are

1. Initiating
2. Planning
3. Executing
4. Monitoring and controlling
5. Closing

1. Initiating

Input for project initiation comes from company's management established by a need of e.g.

- Develop a new product or service
- Construct a building or infrastructure
- Acquire a new information system
- Implement a new business process or procedure

The actual project initiation starts by creating a project mandate. Project mandate is a written document in which project's justification, primary objectives and outcomes, scope, steering group, project resources, funding, stakeholders, and constraints are described. Project mandate is created by project sponsor who by signing the mandate authorizes the project. The project manager is usually appointed at this stage. After the project mandate is done and the project is authorized, the project shifts to planning stage.
A project mandate template is attached as appendix 1.

2. Planning

In planning stage project's total scope is established, project objectives are defined and refined, and actions to achieve project objectives are de-

termined. This is done by the project team with involvement of project stakeholders.

Project manager is responsible for creating a project management plan with assistance of other appointed project members. Project management plan is developed progressively and elaborated by updates during the whole project's life cycle. The plan and its changes during project execution are reviewed and approved by project steering group.

The project management plan is an essential document for whole project organization as it describes how project is planned, executed, monitored and controlled, and closed. The minimum aggregates to be covered in the project management plan are

- Background
- Scope
  - requirements
  - objectives
  - constraints
  - assumptions
  - dependencies and connections
- Risk management
- Organization, roles and responsibilities
- Execution
  - initiation requirements
  - phases
  - schedule
  - milestones and checkpoints
  - budget
- Communication
- Monitoring and controlling
- Change management
- Quality management
  - document management
  - IPR
- Procurement management
- Reference documents
  - project mandate

As the project management plan is created, the project moves on to execution stage.

A Template for project management plan is attached as appendix 2.

3. Executing

When project reaches the executing stage, the focus is on directing and managing the work defined in the project management plan. Project man-

agement mainly concentrates on project quality, procurement, human resources, and communication management at this stage.

During the execution stage it is important to recognize possibilities of unexpected results that might require updates in project planning. Unanticipated risks may come up or there might be changes in available resources or activity durations compared to what was defined in planning phase. In cases like that, a detailed analysis has to be made to see if there is a need for changes in project management plan or other project documents. Any change which might have an effect on the project scope, policies, schedules, plans, procedures, costs or budget requires a change request.

4. Monitoring and controlling

Project manager is responsible for monitoring the project performance. Project performance is monitored continuously through the project life cycle. Project performance to be monitored consists of

- schedule
- procurements
- risks
- costs
- quality

With continuous monitoring project's overall situation is easier to see and it provides a better chance to spot project areas that require additional attention and extra effort. Monitoring also enables better controlling as information needed for decision making is constantly gathered and reviewed.

Project progress and performance is reviewed by project steering group also. Project manager answers to steering group and is responsible for providing sufficient data of project progress. The progress is reviewed in steering group meetings held within certain reporting period defined in project management plan. Project manager creates a project progress report for steering group meeting covering

- status
- schedule
- budget
- emerged issues
- risks
- resources
- decisions needed from steering group
- accomplishments during reporting period

- scheduled activities for next reporting period

A template for project progress report is attached as appendix 3.

5. Closing

As the project has reached its end by achieving objectives set to it and the project's results are accepted by the sponsor, the project manager creates a final report of the project which summarizes the work done. The final report shall consist of

- Background
- Objectives
  - planned vs. realised
- Execution
  - phases
  - quality
  - performance
- Results
- Project management
  - performing
  - challenges
- Development suggestions
- Utilizing results
- Conclusion

All relevant project documents are archived on specific location defined in project management plan.

A template for final report is attached as appendix 4.

APPENDIX 2. PROJECT MANDATE TEMPLATE

Project id Pxxxxxx	**PROJECT MANDATE**	Vihtavuori Plant
Page x(y)	Project **xxxxxxxx**	

CONTENTS

1. BACKGROUND

In this chapter project's justification is explained.
Describe why the project is initiated: change in business, need for new product etc.
An overall description about history, reasons and actions triggering the project initiation.

2. SCOPE

Describe the project scope in high level, don't go on details. Explain what is done and how, and what is left out. Define project's primary objectives and outcomes.

3. ORGANIZATION

Define project organization, a steering group and a project manager if possible.
Define project members' roles and responsibilities

4. STAKEHOLDERS

Define project's possible internal and external stakeholders and their role in project e.g. a customer who is the reason for this project or who is going to approve project's results, or an authority who has to be consulted during project execution.

5. FUNDING

Name here who funds the project. Is this an internally funded project or is it funded by external party e.g. customer. Describe possible special things to be considered related to funding if necessary.

6. CONDITIONS AND CONTRAINTS

Define project's constraints and conditions affecting project execution. Describe what the boundaries are and what conditions there are to fill e.g. is project limited by time or by results.

APPENDIX 3. PROJECT MANAGEMENT PLAN TEMPLATE

Project id Pxxxxxx	**PROJECT MANAGEMENT PLAN**	Nammo Vihtavuori Plant
Page x(y)	Project **xxxxxxxx**	

CONTENTS

1. DOCUMENT MANAGEMENT

Version history

Version	Date	State	Author	Description of changes

Progress reviews

Version	Date	Reviewers	Comments

Project management plan distribution

Name	Notes

Terms and abbreviations

Term/abbreviation	Description

2. BACKGROUND

A short description of project's initiators and history behind them: why it is done, why project is beneficial?
The contents from the project mandate can be used in this description.
An essential point is that everyone reading this chapter understands project's background.

3. SCOPE

Describe the project scope. Use the information from project mandate and specify it if necessary. Describe what is done and how it will be done. The scope works as a base for the whole project planning so be thorough defining it.

3.1 Objectives

Describe project objectives. Primary objectives are found from the project mandate, specify them if necessary.

3.2 Requirements

Describe requirements got so far for the project from the project sponsor or other relevant party. Prioritize requirements and describe also a plan for gathering requirements if necessary.

3.3 Constraints and assumptions

Describe things to be left out from the project and possible assumptions related to project execution e.g. assumption that all necessary resources are available at appointed time.

3.4 Dependencies and connections

List all internal and external dependencies as well as connections affecting the project. Describe the possible effects and how relations are managed and the communication is taken care of.

Dependence/ connection	Description	POC	Managing/communication

4. RISK MANAGEMENT

Describe how risk management is executed in this project: categorization, evaluation, reviewing, approving etc. List project risks evaluation results on this chapter.

5. ORGANIZATION

Describe the project organization and its members' roles and responsibilities.

Organization part	Persons or party in charge / members	Responsibilities

6. EXECUTION

6.1 Initiation requirements

List here all things which have to be done before the project executing stage can start e.g. resources, documentation

6.2 Phases

Describe project's main phases.

Create a WBS (Work Breakdown Structure) by subdividing phases into smaller, more manageable components.

6.3 Schedule

Represent here project's main schedule and insert a detailed, WBS-based schedule as attachment.

6.4 Milestones and checkpoints

List all planned milestones and checkpoints with notes how they are handled.

Milestone/Checkpoint	Activities that should be done	Procedure	Approved by

6.5 Budget

Represent here the project budget main phase level and insert a detailed, WBS-based budget as attachment.

7. COMMUNICATION

Describe how project's communication is managed. List all relevant parties to whom the information is distributed

To who?	What?	How?	How often?	Who's responsible?

8. MONITORING AND CONTROLLING

Describe project's reviewing and reporting procedures. Explain steering group's and project manager's roles in project progress monitoring and decision making.

List possible project reviews and project meetings. Also define the reporting responsibilities for those meetings.

9. CHANGE MANAGEMENT

Describe how possible changes are managed during the project. Describe change request procedures. List those things requiring a change request and documents needing update caused by changes.

10. QUALITY MANAGEMENT

Describe the quality management procedure: how quality is ensured in each phase e.g. related reviews and their participants, results and plans are reviewed by etc.

Explain how project documentation is managed: where documents are archived, how version management is handled etc.

If necessary, point out also how issues with IPR are handled.

11. PROCUREMENT MANAGEMENT

List all known parties relating to project procurement e.g. subcontractors, define their responsibilities and name their contact person

Related party (subcont-ractor etc.)	Activity responsible for	POC

12. REFERENCE DOCUMENTS

List all reference documents related on the project or project management plan e.g. project mandate, quotations, standards, or laws and regulations etc.

Document	Description	Archived

APPENDIX 4. PROGRESS REPORT TEMPLATE

Project id Pxxxxxx	**PROGRESS REPORT**	Nammo Vihtavuori Plant
Page x(y)	Project **xxxxxxxx**	

CONTENTS

1. STATUS

A summary about project's current performance: is everything going as planned, any escalated risks with budget or schedule etc.?
Keep the focus at the project closure e.g. does the project end in time etc.

2. SCHEDULE

Compare the current schedule to originally scheduled end date: is project in schedule, in head of or late of schedule.
Explain possible deviations from original plan.

3. BUDGET

Compare actual costs to budget: is project in, going to exceed, or going under the budget
Represent the latest estimate of project costs
Explain possible deviations from original plan.

Cost area	Estimate (date)	Budget	Difference

4. ISSUES

List all issues emerged since the last report

5. RISKS

Describe the situation with risk management at the moment: has any risks escalated, new risks noticed, possible actions preventing certain risks to escalate etc.

6. RESOURCES

Explain if there are changes concerning project resources e.g. new team members, changes in responsibilities etc.

7. DECISIONS

List all issues which need decision from the steering group.

8. ACCOMPLISHMENTS AND SCHEDULED ACTIVITIES

List significant accomplishments achieved since the last report.

List those activities which are scheduled to perform in next reporting period..

APPENDIX 5. FINAL REPORT TEMPLATE

Project id Pxxxxxx	**FINAL REPORT**	Nammo Vihtavuori Plant
Page x(y)	Project **xxxxxxxx**	

CONTENTS

1. BACKGROUND

Copy from the project management plan.

Define also who initiated the project, the project sponsor.

2. OBJECTIVES

Copy from the project management plan.

Did the project fill objectives set to it? How objectives were achieved? Was there any deviations?

3. EXECUTION

3.1 Phases

Summarize the project execution from initiation to closure.

Point out if project phases differenced from those stated in the project management plan and explain why.

3.2 Quality

Describe how quality control was executed during the project: steering group reviews etc.

Cover monitored targets' actualization compared planned e.g. costs, amount of work, schedule, and results from quality management's point of view.

3.3 Performance

Represent the actualization of features indicating project work's performance compared to planned and budgeted.

	Project management plan	Actual	Deviation
Schedule			
Amount of work			
Costs			

4. RESULTS

List project's results and their delivery date compared to project management plan

Explain if project outcomes were not as defined in project management plan. Also point out when and why the decision to differ from the plan was made.

5. PROJECT MANAGEMENT

5.1 Performing

Describe what went good and what went bad. Explain reasons for not performing as planned.

Use multiple point of views in dealing the performance e.g. planned vs. actual, project organization's working, change management, co-operation, sufficient resources, project work skills etc.

5.2 Challenges

List those things which caused problems during the project and describe how they affected the project.

6. DEVELOPMENT SUGGESTIONS

List all suggestions which came up during the project and were defined to execute in the future.

7. RESULT UTILIZATION

Describe how results got from the project are going to be utilized in the future.

Was there something to learn?

8. CONCLUSION

A brief summary about main points from the final report